

SCALEABLE TRANSPORT OF TDM CHANNELS IN A
SYNCHRONOUS FRAME

Abstract

A method and system for processing communication at a node in a communication system makes use a series of fixed-length data frames in which multiple data streams are multiplexed. Each of the data streams originates from a corresponding source of data in the communication system, and least two of the data streams originate from a same source of data. For each of the series of fixed-length frames that are processed at a node, multiple offsets within the fixed-length frame are identified, each of these offsets being associated with a different one of the sources of data. The data streams which are multiplexed in the series of fixed-length frames are then processed. For each of the data streams, in each of the series of fixed-length frames, that data stream is processed according to the offset identified for that frame that is associated with the source of that data stream. The approach is applicable to SONET communication in which multiple data streams are multiplexed in a series of synchronous payload envelopes (SPEs), and data encoded in each SPE identifies offsets that characterize displacements, such as row offsets, in the SPE that are each associated with a different source node in the SONET network. An advantage of this approach is that pointer processing scales approximately according to the number of nodes in the system rather than to the number of channels being processed.

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